(c) Avenues for cooperation in renewable energy sector are being explored with several countries that include, *inter-alia,* Brazil, Denmark, Germany, Japan, Iceland, Italy, Philippines, South Africa, Thailand and USA.

(d) Renewable energy products are already being exported mainly in the wind energy, small hydro, solar and biomass energy sectors. The prospects for such exports are expected to only improve with rising global oil prices.

Shortage of power

1015. SHRI DARA SINGH:
SHRI RAMDAS AGARWAL:

Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether the country faces acute shortage of energy and is spending more than Rs. 1,00,000 crore on power generation and distribution;

(b) whether solar energy holds the key for power-hungry India, but the same has not been adequately tapped;

(c) what concrete steps Government has taken so far to tap the sun for energy, when advanced solar energy technologies are available; and

(d) the details of Government's plans for expansion and utilization of solar energy resources for domestic and commercial purposes during the Eleventh Five Year Plan?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI VILAS MUTTEMWAR): (a) to (d) Yes, Sir. There is gap in the demand and supply of power in the country. The renewable energy sources such as wind, small hydro and biomass have contributed about 11274 MW to the capacity addition of power generation in the country.

India received solar energy equivalent to over 5,000 trillion KWh per year. The daily average solar energy incident over India varies from 4-7 kwh per square meter depending upon the location. Solar energy can be harnessed through two routes, namely solar photovoltaic (PV) and solar thermal, by direct conversion to electricity and heat energy respectively, Thus solar energy has potential to meet growing demand of energy. The high initial cost of solar energy devices and systems, and lack of sufficient awareness are the main reasons for low utilization of this resource. However, some of the solar energy systems are becoming cost competitive to the conventional alternatives, when compared over the life of the systems. Solar water heaters, solar cookers and photovoltaic systems for small power applications in remote areas are the examples.

The Ministry has taken several steps to increase the utilization of solar energy in the country during the 11th plan, which include (i) expanded programme of the Ministry to encourage utilization of solar energy systems through subsidy or soft loans, (ii) incentive to manufacturers, commercial users and power project developers, (iii) research and development to reduce the cost, improve the efficiency and performance of solar energy systems, and (iv) support to Akshya Urja shops to provide additional channels for sale and after-sales servicing of solar energy systems and (v) create awareness about the solar energy systems and their benefits.

Potentials of wind and ocean energy in Tamil Nadu

1016. SHRI S. ANBALAGAN: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to state:

(a) whether Government had taken steps to harness huge wind and ocean energy potential available in Tamil Nadu;

(b) if so, the details thereof and the achievement made;

(c) whether new initiative are proposed to be made by Government to harness the huge potential of wind and ocean evergies in the State during the Eleventh Five Year Plan; and

(d) if so, the details thereof including the amount allocated for the purpose and if not, the reasons therefor?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI VILAS MUTTEMWAR): (a) and (b) The Government of India promotes settings up of commercial wind power projects in the country, including in the State of Tamil Nadu, by providing incentives such as concessional import duty for wind electricity generator sub-systems, excise duty exemption, ten years tax holiday on wind power projects, benefits of accelerated depreciation, term loan from Indian Renewable Energy Development Agency (IREDA) and identification of more potential locations by carrying out wind resource assessment studies. This apart, preferential tariff and grid evacuation facilities are provided for wind power in the State of Tamil Nadu. A wind power installed capacity of 7844 MW has been achieved upto 31.12.2007 in the country which includes 3712MW in Tamil Nadu. Production of power from Ocean Energy has not been found to be cost effective on commercial scale.

(c) and (d) A capacity addition of 10,500 MW from wind power has been planned in the country during the 11th Plan period *i.e.* 2007—2012. The State Govt, of Tamil Nadu has planned a target of 2,500 MW from wind power during the 11th Plan period. An outlay of Rs. 75 crore has been proposed during the 11th Plan to support wind resource assessment and demonstration projects in various States, R&D projects, etc. in the country.

SEZ for renewable energy systems

1017. SHRI B.K. HARIPRASAD: Will the Minister of NEW AND RENEWABLE ENERGY be pleased to State:

(a) the status of implementation of the SEZs for the manufacture of renewable energy devices and systems to be located near Nagpur with an initial investment of $ 2.00 billion in the first phase; and

(b) whether Government has identified the Anchor-company, which would foster ancilliaries in the first phase of the project?

THE MINISTER OF STATE OF THE MINISTRY OF NEW AND RENEWABLE ENERGY (SHRI VILAS MUTTEMWAR): (a) and (b) Indian Renewable Energy Development Agency (IREDA), a non-banking financial company under the administrative control of this Ministry, is envisaging formation of a Special Purpose Vehicle to facilitate setting up a SEZ for production of renewable energy equipment. Presently IREDA is in the process of discussing